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FILE LAST UPDATED: 28 Mar 2004  (20040328/ED)

 This file contains CAS Registry Numbers for easy and accurate
 substance identification.


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=> d stat que l3
L1            41 SEA FILE=REGISTRY ABB=ON  PLU=ON  RIRTQSFSLQER|GITRKKTFKEVANCV/
                 SQSP
L3            29 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L1


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=> d ibib abs hitrn l3 1-29

L3   ANSWER 1 OF 29  HCAPLUS  COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER:         2004:162796  HCAPLUS
DOCUMENT NUMBER:          140:194407
TITLE:                    Sequences of modified human endothelial nitric oxide
                          synthase (eNOS) and use for gene therapy
INVENTOR(S):              Blasko, Eric; Kauser, Katalin; Parkinson, John
PATENT ASSIGNEE(S):       Schering Aktiengesellschaft, Germany
SOURCE:                   PCT Int. Appl., 57 pp.
                          CODEN: PIXXD2
DOCUMENT TYPE:            Patent
LANGUAGE:                 English
FAMILY ACC. NUM. COUNT:   1
PATENT INFORMATION:

     PATENT NO.          KIND  DATE          APPLICATION NO.  DATE
     ----------------    ----  --------      ---------------  --------
     WO 2004016764       A2    20040226      WO 2003-US25745  20030815
         W:  AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN,
             CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH,
             GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR,
             LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM,
             PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN,
             TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW, AM, AZ, BY,
             KG, KZ, MD, RU
         RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, BG,
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CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

PRIORITY APPLN. INFO.: US 2002-403638P P 20020816

AB The present invention provides endothelial nitric oxide synthase (eNOS) polypeptide mutants and polynucleotides encoding such polypeptide mutants, useful for gene therapy. In particular, the invention provides eNOS polypeptide mutants having one or more mutations in an amino acid sequence corresponding to a functional domain of a mammalian eNOS. More particularly, the invention provides eNOS polypeptide mutants having at least one mutation at a position corresponding to an amino acid residue in a calmodulin-binding site that is phosporylated in mammalian cells, where the mutation is not an amino acid substitution to Ala or Asp in an eNOS polypeptide mutant having a single mutation that is at the phosphorylation site ; and to polynucleotides encoding such polypeptide mutants. The present invention further provides prophylactic, diagnostic, and therapeutic methods of using such eNOS polypeptide mutants and polynucleotides.

IT **663233-94-1P**

RL: BPN (Biosynthetic preparation); BSU (Biological study, unclassified); PRP (Properties); BIOL (Biological study); PREP (Preparation)
(amino acid sequence; sequences of modified human endothelial nitric oxide synthase (eNOS) and use for gene therapy)

L3 ANSWER 2 OF 29 HCAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 2004:162793 HCAPLUS
DOCUMENT NUMBER: 140:212008
TITLE: Sequences of modified human endothelial nitric oxide synthase (eNOS) and use for gene therapy
INVENTOR(S): Dole, William P.; Kauser, Katalin; Qian, Hu Sheng; Rubanyi, Gabor
PATENT ASSIGNEE(S): Schering Aktiengesellschaft, Germany
SOURCE: PCT Int. Appl., 82 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2004016761	A2	20040226	WO 2003-US25626	20030815

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU

RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

PRIORITY APPLN. INFO.: US 2002-403637P P 20020816

AB The present invention provides novel methods of preventing, diagnosing, and treating Crit. Limb Ischemia (CLI), using eNOS polypeptides and polynucleotides to modulate eNOS activity in cells. Wild-type and mutant eNOS polypeptides, and polynucleotides encoding such polypeptides, are provided for use in the methods of the present invention. The eNOS mutant polypeptides of the present invention have at least one mutation corresponding to a site in a functional domain of a mammalian eNOS that is phosphorylated in cells.

IT **663965-84-2P**

RL: BPN (Biosynthetic preparation); BSU (Biological study, unclassified); DGN (Diagnostic use); PAC (Pharmacological activity); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(amino acid sequence; sequences of modified human endothelial nitric oxide synthase (eNOS) and use for gene therapy)

L3 ANSWER 3 OF 29 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 2004:113492 HCAPLUS
DOCUMENT NUMBER: 140:177082
TITLE: Method of identifying a substance that affects long term memory and activity of CREM/CREB/ATF-1 subfamily members
INVENTOR(S): Tully, Timothy P.; Yin, Jerry Chi-Ping
PATENT ASSIGNEE(S): Cold Spring Harbor Laboratory, USA
SOURCE: U.S., 75 pp., Cont.-in-part of U.S. Ser. No. 361,063. CODEN: USXXAM
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 3
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 6689557	B1	20040210	US 1997-809917	19970707
US 5929223	A	19990727	US 1994-319866	19941007
US 6051559	A	20000418	US 1994-361063	19941221
WO 9611270	A1	19960418	WO 1995-US13198	19951006

W: CA, JP, MX, US, US
RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE

PRIORITY APPLN. INFO.:
US 1994-319866 A2 19941007
US 1994-361063 A2 19941221
WO 1995-US13198 W 19951006

AB The invention claims methods of modulating long term memory, identifying a substance capable of affecting long term memory, and assessing the effect of a drug on long term memory. Specifically the invention claims a process of treating an animal, such as Drosophila, Aplysia, or rodent, with a test substance, measuring long term memory, and measuring CREB, CREM, or ATF-1 isoform-dependent transcription activation or repression or measuring the dimer state of CREB/CREM/ATF-1 members. A correlation between effects on long term memory and CREB/CREM/ATF-1 activity identifies candidate drugs. The Drosophila CREB2 gene encodes cAMP-responsive isoforms and antagonistic blocker (or repressor) isoforms. Expression of transcription factor CREB2 isoform b disrupts long term memory in trained Drosophila melanogaster. The C-terminal bZIP (leucine zipper) domain of Drosophila melanogaster CREB2-a protein is homologous to CREB, CREM, and ATF-1 transcription factors.

IT **657442-93-8**
RL: PRP (Properties)
(unclaimed protein sequence; method of identifying a substance that affects long term memory and activity of CREM/CREB/ATF-1 subfamily members)

REFERENCE COUNT: 67 THERE ARE 67 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L3 ANSWER 4 OF 29 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 2004:101274 HCAPLUS
DOCUMENT NUMBER: 140:158645
TITLE: Genes overexpressed in adipocytes and their use in diagnosis and treatment of adipose tissue disorders
INVENTOR(S): Chada, Kiran; Chouinard, Roland; Ashar, Hena; Sayed, Abu M. D.
PATENT ASSIGNEE(S): Hmgene, Inc., USA

SOURCE: PCT Int. Appl., 91 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2004011618	A2	20040205	WO 2003-US23684	20030729

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM

RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

PRIORITY APPLN. INFO.: US 2002-398785P P 20020729
US 2003-478206P P 20030612

AB Disclosed is a method of identifying genes that are over-expressed in adipose tissue as compared to pre-adipocyte tissue or other tissues, comprising performing differential gene expression anal. between the white adipose tissue (WAT) or stromal vascular tissue (SVT) from any two different mice selected from the group consisting of wild-type, HMGI-C -/-, ob/ob, and HMGI-C-/- ob/ob genotype mice. Based on this differential gene expression anal. using the Affymetrix GeneChip MG-U74, a no. of nucleotide sequences are identified whose expression is adipocyte-specific. A preferred embodiment of the invention is expression of the sFRP-5 (secreted frizzled-related protein 5) and npr-3 (natriuretic peptide receptor C) genes. The identified nucleotide sequences and their corresponding polypeptides may then be used to prevent adipogenesis, to treat diabetes, and to screen for small mols. that can modulate or prevent adipogenesis and to treat diabetes and obesity.

IT **654291-70-0 654291-71-1**
RL: BSU (Biological study, unclassified); DGN (Diagnostic use); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(amino acid sequence; genes overexpressed in adipocytes and their use in diagnosis and treatment of adipose tissue disorders)

L3 ANSWER 5 OF 29 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 2003:875393 HCAPLUS
DOCUMENT NUMBER: 139:363045
TITLE: Genes expressed in atherosclerotic tissue and their use in diagnosis and pharmacogenetics
INVENTOR(S): Nevins, Joseph; West, Mike; Goldschmidt, Pascal
PATENT ASSIGNEE(S): Duke University, USA
SOURCE: PCT Int. Appl., 408 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 3
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2003091391	A2	20031106	WO 2002-US38221	20021112

W: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN,

MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM,
TR, TT, UA, UG, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU,
TJ, TM
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, BG,
CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL,
PT, SE, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR,
NE, SN, TD, TG

WO 2003091391 A2 20031106 WO 2002-XA38221 20021112
W: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ,
DE, DK, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IS, JP,
KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN,
MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM,
TR, TT, UA, UG, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU,
TJ, TM
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, BG,
CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL,
PT, SE, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR,
NE, SN, TD, TG

WO 2003091391 A2 20031106 WO 2002-XB38221 20021112
W: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ,
DE, DK, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IS, JP,
KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN,
MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM,
TR, TT, UA, UG, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU,
TJ, TM
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, BG,
CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL,
PT, SE, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR,
NE, SN, TD, TG

US 2003224383 A1 20031204 US 2002-291885 20021112
PRIORITY APPLN. INFO.: US 2002-374547P P 20020423
US 2002-420784P P 20021024
US 2002-421043P P 20021025
US 2002-424680P P 20021108
WO 2002-US38221 A 20021112

AB Genes whose expression is correlated with an determinant of an atherosclerotic phenotype are provided. Also provided are methods of using the subject atherosclerotic determinant genes in diagnosis and treatment methods, as well as drug screening methods. In addn., reagents and kits thereof that find use in practicing the subject methods are provided. Also provided are methods of detg. whether a gene is correlated with a disease phenotype, where correlation is detd. using a Bayesian anal.

IT **391971-44-1**, Nitric oxide synthase (human)
RL: BSU (Biological study, unclassified); PRP (Properties); BIOL (Biological study)
(amino acid sequence; genes expressed in atherosclerotic tissue and their use in diagnosis and pharmacogenetics)

L3 ANSWER 6 OF 29 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 2003:730501 HCAPLUS
DOCUMENT NUMBER: 139:226481
TITLE: Nucleic acids encoding nitric oxide synthase variants with enhanced activity
INVENTOR(S): Stuehr, Dennis J.; Adak, Subrata
PATENT ASSIGNEE(S): The Cleveland Clinic Foundation, USA
SOURCE: U.S., 35 pp.
CODEN: USXXAM
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 6620616	B1	20030916	US 2000-661258	20000913

PRIORITY APPLN. INFO.: US 2000-661258 20000913

AB Isolated polynucleotides which encode a variant of a mammalian nitric oxide synthase protein are provided. The variant nitric oxide synthase protein and polypeptides are substitution mutants, wherein the tryptophan that is normally located on the .alpha.3 helix, six residues upstream from the cysteine which binds heme in the corresponding non-variant nitric oxide synthase protein or peptide is replaced with one of the other 19 naturally occurring amino acid residues. Substitution of Trp-409 with Phe or Tyr in rat neuronal nitric oxide synthase alters rates of NO synthesis and NADPH oxidn. but does not alter cytochrome c redn. in any case, suggesting the mutations only affect the oxygenase domain of nNOS. Surprisingly, the W409F and W409Y mutants had 3- and 1.8-fold faster rates of NO synthesis from arginine compared with the wild type, resp.; when N.omega.-hydroxy-L-arginine replaces arginine as the substrate, an even greater hyperactivity is obsd. for both mutants. The present invention also relates to vectors and recombinant cells comprising a nucleic acid which encodes a variant of a mammalian nitric oxide synthase protein. The present invention also relates to the nitric oxide synthase variant proteins and polypeptides.

IT **590522-19-3DP**, Synthase, nitric oxide, 3 (human), variants
590522-26-2DP, variants **590522-27-3DP**, variants
RL: BPN (Biosynthetic preparation); BSU (Biological study, unclassified); CAT (Catalyst use); PRP (Properties); BIOL (Biological study); PREP (Preparation); USES (Uses)
(amino acid sequence; nucleic acids encoding nitric oxide synthase variants with enhanced activity)

REFERENCE COUNT: 36 THERE ARE 36 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L3 ANSWER 7 OF 29 HCAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 2003:448590 HCAPLUS
Correction of: 2003:177122

DOCUMENT NUMBER: 139:31810
Correction of: 138:216594

TITLE: Differentially expressed nucleic acids and their encoded proteins associated with pain and their use in screening for regulatory agents

INVENTOR(S): Woolf, Clifford; D'Urso, Donatella; Befort, Katia; Costigan, Michael

PATENT ASSIGNEE(S): The General Hospital Corporation, USA; Bayer AG

SOURCE: PCT Int. Appl., 1017 pp.
CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 7

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2003016475	A2	20030227	WO 2002-XC25765	20020814

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW, AM, AZ, BY, KG, MD, RU, TJ, TM

RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

WO 2003016475 A2 20030227 WO 2002-US25765 20020814
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

PRIORITY APPLN. INFO.: US 2001-312147P P 20010814
US 2001-346382P P 20011101
US 2001-333347P P 20011126
WO 2002-US25765 A 20020814

AB The present invention relates to human and rat nucleic acid sequences which are related to pain and which are differentially expressed during pain. The nucleic acids are differentially expressed by at least .+-.1.4-fold in any or all of the following conditions using the Affymetrix human U95, murine U74 and rat U34 GeneChip arrays: axotomy, spared nerve injury, chronic construction, spinal segmental nerve lesion, and inflammatory pain models. The invention further relates to methods of identifying nucleic acid sequences which are differentially expressed during pain, microarrays comprising such differentially expressed sequences, and methods of screening agents for the ability to regulate the expression of such differentially expressed sequences. [This abstr. record is one of seven records for this document necessitated by the large no. of index entries required to fully index the document and publication system constraints.].

IT **540830-45-3**
RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); PRP (Properties); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(amino acid sequence; differentially expressed nucleic acids and their encoded proteins assocd. with pain and their use in screening for regulatory agents)

L3 ANSWER 8 OF 29 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 2003:282033 HCAPLUS
DOCUMENT NUMBER: 138:300159
TITLE: Positive identification of phospho-proteins using motif-specific, context-independent antibodies coupled with database searching
INVENTOR(S): Comb, Michael J.; Tan, Yi; Zhang, Hui
PATENT ASSIGNEE(S): Cell Signaling Technology, Inc., USA
SOURCE: U.S. Pat. Appl. Publ., 49 pp., Cont.-in-part of U.S. Ser. No. 535,364.
CODEN: USXXCO
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 5
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2003068652	A1	20030410	US 2002-174105	20020618
US 6441140	B1	20020827	US 1998-148712	19980904
WO 2000014536	A1	20000316	WO 1999-US19597	19990826
W: CA, JP				
RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
WO 2003107003	A1	20031224	WO 2002-US19308	20020619

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZM, ZW
RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR

PRIORITY APPLN. INFO.: US 1998-148712 A2 19980904
WO 1999-US19597 W 19990826
US 2000-535364 A2 20000324
US 2002-174105 A2 20020618

AB The authors disclose a method for producing antibodies that selectively recognize short, modified amino acid motifs substantially independent of the surrounding amino acid context in which the motif occurs. The motifs consist of single modified amino acids, for example phosphotyrosine or acetylated lysine, as well other modified motifs of multiple amino acids, such as kinase consensus substrate motifs and protein-protein binding motifs relevant to cell signal transduction. Also provided are methods of profiling large and diverse protein populations on a genome-wide basis by utilizing the antibodies of the invention, and methods for the pos. identification of cellular phosphoproteins using one or more motif-specific, context-independent antibodies of the invention coupled with protein database searching.

IT **507478-82-2**
RL: PRP (Properties)
(unclaimed sequence; pos. identification of phospho-proteins using motif-specific, context-independent antibodies coupled with database searching)

L3 ANSWER 9 OF 29 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 2003:8418 HCAPLUS
DOCUMENT NUMBER: 138:164527
TITLE: Analysis of the mouse transcriptome based on functional annotation of 60,770 full-length cDNAs
AUTHOR(S): Okazaki, Y.; Furuno, M.; Kasukawa, T.; Adachi, J.; Bono, H.; Kondo, S.; Nikaido, I.; Osato, N.; Saito, R.; Suzuki, H.; Yamanaka, I.; Kiyosawa, H.; Yagi, K.; Tomaru, Y.; Hasegawa, Y.; Nogami, A.; Schoenbach, C.; Gojobori, T.; Baldarelli, R.; Hill, D. P.; Bult, C.; Hume, D. A.; Quackenbush, J.; Schriml, L. M.; Kanapin, A.; Matsuda, H.; Batalov, S.; Beisel, K. W.; Blake, J. A.; Bradt, D.; Brusic, V.; Chothia, C.; Corbani, L. E.; Cousins, S.; Dalla, E.; Dragani, T. A.; Fletcher, C. F.; Forrest, A.; Frazer, K. S.; Gaasterland, T.; Gariboldi, M.; Gissi, C.; Godzik, A.; Gough, J.; Grimmond, S.; Gustincich, S.; Hirokawa, N.; Jackson, I. J.; Jarvis, E. D.; Kanai, A.; Kawaji, H.; Kawasawa, Y.; Kedzierski, R. M.; King, B. L.; Konagaya, A.; Kurochkin, I. V.; Lee, Y.; Lenhard, B.; Lyons, P. A.; Maglott, D. R.; Maltais, L.; Marchionni, L.; McKenzie, L.; Miki, H.; Nagashima, T.; Numata, K.; Okido, T.; Pavan, W. J.; Pertea, G.; Pesole, G.; Petrovsky, N.; Pillai, R.; Pontius, J. U.; Qi, D.; Ramachandran, S.; Ravasi, T.; Reed, J. C.; Reed, D. J.; Reid, J.; Ring, B. Z.; Ringwald, M.; Sandelin, A.; Schneider, C.; Semple, C. A. M.; Setou, M.; Shimada, K.; Sultana, R.; Takenaka, Y.; Taylor, M. S.; Teasdale, R. D.; Tomita, M.; Verardo, R.; Wagner, L.; Wahlestedt, C.; Wang, Y.; Watanabe, Y.; Wells, C.; Wilming, L. G.; Wynshaw-Boris, A.; Yanagisawa, M.; Yang, I.; Yang, L.; Yuan, Z.; Zavolan, M.; Zhu, Y.; Zimmer, A.; Carninci, P.; Hayatsu, N.; Hirozane-Kishikawa, T.; Konno, H.;

Nakamura, M.; Sakazume, N.; Sato, K.; Shiraki, T.; Waki, K.; Kawai, J.; Aizawa, K.; Arakawa, T.; Fukuda, S.; Hara, A.; Hashizume, W.; Imotani, K.; Ishii, Y.; Itoh, M.; Kagawa, I.; Miyazaki, A.; Sakai, K.; Sasaki, D.; Shibata, K.; Shinagawa, A.; Yasunishi, A.; Yoshino, M.; Waterston, R.; Lander, E. S.; Rogers, J.; Birney, E.; Hayashizaki, Y.

CORPORATE SOURCE: Laboratory for Genome Exploration Research Group, RIKEN Genomic Sciences Center (GSC), Yokohama Institute, 1-7-22 Suehiro-cho, Tsurumi-ku, Yokohama, Kanagawa, 230-0045, Japan

SOURCE: Nature (London, United Kingdom) (2002), 420(6915), 563-573
CODEN: NATUAS; ISSN: 0028-0836

PUBLISHER: Nature Publishing Group

DOCUMENT TYPE: Journal

LANGUAGE: English

AB Only a small proportion of the mouse genome is transcribed into mature mRNA transcripts. There is an international collaborative effort to identify all full-length mRNA transcripts from the mouse, and to ensure that each is represented in a phys. collection of clones. The manual annotation of 60,770 full-length mouse cDNA sequences is now reported. These are clustered into 33,409 'transcriptional units', contributing 90.1% of a newly established mouse transcriptome database. Of these transcriptional units, 4258 are new protein-coding and 11,665 are new non-coding messages, indicating that non-coding RNA is a major component of the transcriptome. Forty-one percent of all transcriptional units showed evidence of alternative splicing. In protein-coding transcripts, 79% of splice variations altered the protein product. Whole-transcriptome analyses resulted in the identification of 2431 sense-antisense pairs. The present work, completely supported by phys. clones, provides the most comprehensive survey of a mammalian transcriptome so far, and is a valuable resource for functional genomics. The cDNA sequences are deposited in GenBank/EMBL/DDBJ under accession nos. AK002213-AK021412, AK027261-AK054560, AK075567-AK090394, and AK117103-AK117104. [This abstr. record is one of thirty records for this document necessitated by the large no. of index entries required to fully index the document and publication system constraints.].

IT **493628-55-0**
RL: BSU (Biological study, unclassified); PRP (Properties); BIOL (Biological study)
(amino acid sequence; anal. of the mouse transcriptome based on functional annotation of 60,770 full-length cDNAs)

L3 ANSWER 10 OF 29 HCAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 2002:72748 HCAPLUS

DOCUMENT NUMBER: 136:146104

TITLE: Human stress genes identified using DNA microarrays

INVENTOR(S): Chenchik, Alex; Lukashev, Matvey E.

PATENT ASSIGNEE(S): Clontech, USA

SOURCE: U.S. Pat. Appl. Publ., 57 pp., Cont.-in-part of U.S. Ser. No. 441,920.
CODEN: USXXCO

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2002009730	A1	20020124	US 2001-782909	20010213

PRIORITY APPLN. INFO.: US 1998-222256 B2 19981228
US 1999-440305 B2 19991117

US 1999-441920 A2 19991117

AB Human stress arrays and methods for their use are provided. The subject arrays include a plurality of polynucleotide spots, each of which is made up of a polynucleotide probe compn. of unique polynucleotides corresponding to a human stress gene. The av. length of the polynucleotide probes is between 50 to 1000 nucleotides. The d. of the spots on the array did not exceed 400/cm2 and the spots had a diam. ranging between 10 to 5000 .mu.m. Furthermore, the no. of polynucleotide probe spots on the array ranged between 50 to 2000 nucleotides. The subject arrays find use in hybridization assays, particularly in assays for the identification of differential gene expression of human stress genes. 236 Different human stress genes were identified using this approach.

IT **391971-44-1**, Nitric oxide synthase (human)
RL: BSU (Biological study, unclassified); PRP (Properties); BIOL (Biological study)
(amino acid sequence; human stress genes identified using DNA microarrays)

L3 ANSWER 11 OF 29 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 2001:50510 HCAPLUS
DOCUMENT NUMBER: 134:110462
TITLE: Gene therapy for enhancing and/or inducing angiogenesis by using nitric oxide synthase gene
INVENTOR(S): Vogels, Ronald; Verlinden, Stefan Frederik Franciscus
PATENT ASSIGNEE(S): Introgene B.V., Neth.
SOURCE: PCT Int. Appl., 36 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 2
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2001003728	A2	20010118	WO 2000-NL482	20000707
WO 2001003728	A3	20010510		
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM			
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
EP 1067190	A1	20010110	EP 1999-202263	19990709
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
US 2003087867	A1	20030508	US 2002-224249	20020819

PRIORITY APPLN. INFO.:
EP 1999-202263 A 19990709
US 1999-143101P P 19990709
WO 2000-NL482 A1 20000707
US 2002-42770 A1 20020109

AB The invention relates to gene therapy for enhancing and/or inducing angiogenesis, wherein use is made of a nucleic acid sequence encoding nitric oxide synthase (NOS). In particular, the nucleic acid sequence is administered in a systemic treatment, preferably comprising isolated tissue perfusion. In one aspect the invention provides a method for increasing NO and/or endothelial growth factors such as, but not limited to, VGEF and/or bFGF. In another aspect the invention provides a method for increasing vasodilation of blood vessels. In yet another aspect, the invention provides a method for increasing angiogenesis through locally

delivering an expression vector, preferably an adenovirus vector, comprising at least a nucleic acid encoding NOS, to sites selected for being provided with the capacity to induce, or at least in part promote, angiogenesis.

IT **148466-32-4**
RL: PRP (Properties)
(unclaimed protein sequence; gene therapy for enhancing and/or inducing angiogenesis by using nitric oxide synthase gene)

L3 ANSWER 12 OF 29 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 2001:28652 HCAPLUS
DOCUMENT NUMBER: 134:96239
TITLE: Viral expression vectors for nitric oxide synthase genes and their use in regulation of angiogenesis
INVENTOR(S): Vogels, Ronald; Verlinden, Stefan
PATENT ASSIGNEE(S): Introgene B.V., Neth.
SOURCE: Eur. Pat. Appl., 39 pp.
CODEN: EPXXDW
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 2
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 1067190	A1	20010110	EP 1999-202263	19990709
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
WO 2001003728	A2	20010118	WO 2000-NL482	20000707
WO 2001003728	A3	20010510		
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
US 2003087867	A1	20030508	US 2002-224249	20020819

PRIORITY APPLN. INFO.:
EP 1999-202263 A 19990709
US 1999-143101P P 19990709
WO 2000-NL482 A1 20000707
US 2002-42770 A1 20020109

AB The invention relates to gene therapy for enhancing and/or inducing angiogenesis, using genetic vectors expressing gene for nitric oxide synthase (NOS). In particular, the nucleic acid sequence is administered in a systemic treatment, preferably comprising isolated tissue perfusion.

IT **148466-32-4**
RL: PRP (Properties)
(unclaimed protein sequence; viral expression vectors for nitric oxide synthase genes and their use in regulation of angiogenesis)
REFERENCE COUNT: 9 THERE ARE 9 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L3 ANSWER 13 OF 29 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 2000:756455 HCAPLUS
DOCUMENT NUMBER: 133:317552
TITLE: Endothelial nitric oxide synthase (eNOS) mutations useful for gene therapy and therapeutic screening
INVENTOR(S): Sessa, William C.
PATENT ASSIGNEE(S): Yale University, USA
SOURCE: PCT Int. Appl., 70 pp.

CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2000062605	A1	20001026	WO 2000-US9913	20000414
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
BR 2000009805	A	20020115	BR 2000-9805	20000414
EP 1178722	A1	20020213	EP 2000-922148	20000414
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
JP 2002541829	T2	20021210	JP 2000-611751	20000414
EE 200100538	A	20021216	EE 2001-538	20000414
US 2003049823	A1	20030313	US 2001-956699	20010920
NO 2001005008	A	20011207	NO 2001-5008	20011015
BG 106051	A	20020628	BG 2001-106051	20011026
HR 2001000797	A1	20030228	HR 2001-797	20011029

PRIORITY APPLN. INFO.: US 1999-129550P P 19990416
WO 2000-US9913 W 20000414

AB The invention provides NOS variants or mutants which contain structural alterations in the site of Akt-dependent phosphorylation. The altered NOS proteins or peptides, esp. the human eNOS proteins or peptides, Akt proteins or polypeptides, and their encoding nucleic acid mols., are useful as gene therapy agents for the treatment of diseases including post-angioplasty restenosis, hypertension, atherosclerosis, heart failure, diabetes and diseases with defective angiogenesis. NOS proteins and peptides are also useful in methods of screening for agents which modulate NOS activity.

IT **302776-25-6**
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(endothelial NO synthase mutations useful for gene therapy and therapeutic screening)

REFERENCE COUNT: 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L3 ANSWER 14 OF 29 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 2000:253014 HCAPLUS
DOCUMENT NUMBER: 132:298871
TITLE: Cloning and characterizing of genes associated with long-term memory
INVENTOR(S): Tully, Timothy P.; Yin, Jerry Chi-Ping
PATENT ASSIGNEE(S): Cold Spring Harbor Laboratory, USA
SOURCE: U.S., 76 pp., Cont.-in-part of U.S. Ser. No. 319,866.
CODEN: USXXAM
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 3
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE

US 6051559	A	20000418	US 1994-361063	19941221
US 5929223	A	19990727	US 1994-319866	19941007
CA 2202087	AA	19960418	CA 1995-2202087	19951006
WO 9611270	A1	19960418	WO 1995-US13198	19951006
W: CA, JP, MX, US, US				
RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
EP 781335	A1	19970702	EP 1995-938747	19951006
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LI, LU, MC, NL, PT, SE				
JP 10507348	T2	19980721	JP 1995-512717	19951006
US 6689557	B1	20040210	US 1997-809917	19970707

PRIORITY APPLN. INFO.:
US 1994-319866 A2 19941007
US 1994-361063 A 19941221
WO 1995-US13198 W 19951006

AB A method of regulating long term memory is disclosed. Also disclosed is isolated DNA encoding a cyclic 3',5'-adenosine monophosphate-responsive transcriptional activator, isolated DNA encoding an antagonist of cyclic 3',5'-adenosine monophosphate-inducible transcription, isolated DNA encoding an enhancer-specific activator, and isolated DNA encoding a nitric oxide synthase. A method for assessing the effect of a drug on long term memory formation is also disclosed.

IT **147883-95-2**
RL: PRP (Properties)
(unclaimed protein sequence; cloning and characterizing of genes assocd. with long-term memory)

REFERENCE COUNT: 70 THERE ARE 70 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L3 ANSWER 15 OF 29 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1999:400692 HCAPLUS
DOCUMENT NUMBER: 131:209930
TITLE: Assembly and characterization of canine heart endothelial nitric oxide synthase cDNA and 5'-flanking sequence by homology (RT-)PCR cloning
AUTHOR(S): Schwemmer, Michael; Bassenge, Eberhard
CORPORATE SOURCE: Institute of Applied Physiology, Albert-Ludwigs-University, Freiburg, D-79104, Germany
SOURCE: Nitric Oxide (1999), 3(3), 254-264
CODEN: NIOXF5; ISSN: 1089-8603
PUBLISHER: Academic Press
DOCUMENT TYPE: Journal
LANGUAGE: English

AB A broad spectrum of cardiovascular diseases is studied in canine animal models, in which dysfunction or dysregulation of the endothelial nitric oxide synthase (ecNOS) is of pivotal pathogenetic importance. To provide the tools for subsequent mol. analyses of ecNOS structure or function and to identify putative regulatory factors we isolated and characterized the canine heart ecNOS cDNA and putative regulatory (promoter) sequences. The complete coding sequence, 5'- plus part of 3'-untranslated regions (UTR) of ecNOS cDNA, and part of the 5'-flanking sequence (putative promoter region) were identified by homol. (RT-)PCR cloning using canine heart total RNA or genomic DNA. Primer sequences were derived from bovine/human ecNOS cDNAs or genes. An ecNOS sequence contig of 5138 nucleotides length was established contg. an open reading frame of 3618 nucleotides (1206 amino acids predicting a 133-kDa protein) and 253 bp 3'-UTR (distal to TGA codon)/1267 bp proximal to ATG codon (contg. 5'-UTR and 5'-flanking sequences = putative promoter region). Comparison to human, bovine, murine, or porcine ecNOS sequences at the nucleotide or amino acid level yielded between 86 and 91% or 83 and 84% homologies, resp. The canine ecNOS 5'-flanking sequence (putative promoter region) revealed stretches of homol. up to 86% as compared to the human sequence contg. a cluster of binding sites for several regulatory elements. The homol. (RT-)PCR cloning strategy is presented as an alternative to common library cloning approaches. The obtained canine ecNOS sequence might serve to further

analyze the structure, regulated function (promoter region consensus sites), and expression of ecNOS in different pathophysiol. conditions and in other species (GenBank Accession No BankIt264069 AF143503). (c) 1999 Academic Press.

IT **242798-09-0**
RL: BSU (Biological study, unclassified); PRP (Properties); BIOL (Biological study)
(amino acid sequence; assembly and characterization of canine heart endothelial nitric oxide synthase cDNA and 5'-flanking sequence by homol. (RT-)PCR cloning)

REFERENCE COUNT: 69 THERE ARE 69 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L3 ANSWER 16 OF 29 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1998:337995 HCAPLUS
DOCUMENT NUMBER: 129:64911
TITLE: Cloning and expression of cDNA for human endothelial nitric oxide synthase
INVENTOR(S): Suenobu, Noriko
PATENT ASSIGNEE(S): Pola Chemical Industries, Inc., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 11 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 10136989	A2	19980526	JP 1997-246691	19970911

PRIORITY APPLN. INFO.: JP 1996-263457 19960912

AB The cDNA encoding endothelial nitric oxide synthase (e-NOS) is isolated from a cDNA library of MP-HUVEC-4 cells derived from human umbilical vascular endothelium. The cDNA contains an open reading frame encoding 1203-amino acid e-NOS. Claimed are methods for the prepn. of e-NOS by expression of the cDNA in animal cells or a microorganism such as Escherichia coli.

IT **148466-32-4**
RL: BOC (Biological occurrence); BSU (Biological study, unclassified); PRP (Properties); BIOL (Biological study); OCCU (Occurrence)
(nucleotide sequence; cloning and expression of cDNA for human endothelial nitric oxide synthase)

L3 ANSWER 17 OF 29 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1997:265995 HCAPLUS
DOCUMENT NUMBER: 126:327411
TITLE: Molecular cloning, characterization and expression of a nitric oxide synthase from porcine pulmonary artery endothelial cells
AUTHOR(S): Zhang, Jianliang; Patel, Jawaharlal M.; Block, Edward R.
CORPORATE SOURCE: Dep. of Medicine, Univ. of Florida, Gainesville, FL, 32608, USA
SOURCE: Comparative Biochemistry and Physiology, B: Biochemistry and Molecular Biology (1997), 116B(4), 485-491
CODEN: CBPBB8; ISSN: 0305-0491
PUBLISHER: Elsevier
DOCUMENT TYPE: Journal
LANGUAGE: English

AB The lack of sequence information and clones of porcine pulmonary artery endothelial cell (PAEC) constitutive nitric oxide synthase (ecNOS) cDNA limits comparative anal. between porcine and human PAEC. Therefore, we

cloned, characterized and expressed the ecNOS cDNA from porcine PAEC. Two oligonucleotide primers were designed based on the published human ecNOS cDNA sequence and used to clone porcine PAEC ecNOS using 5' and 3' rapid amplification of cDNA ends reverse transcriptase polymerase chain reaction technique. A full-length ecNOS cDNA was cloned and sequenced, representing a protein of 1205 amino acids with a mol. mass of 134 kDa. A mammalian expression vector (pcDNA3) contg. this cDNA was transfected into COS-7 cells, and ecNOS activity was detected by monitoring the formation of [3H]-citrulline from [3H]-L-arginine. Expression of ecNOS activity was predominantly assocd. (>90%) with the total membrane fraction of these transfected cells. The deduced amino acid sequence of porcine ecNOS cDNA, contg. binding sites for NADPH, FAD and bound FMN, shows 94% identity to human ecNOS. The mol. wt. of porcine ecNOS mRNA was estd. to be 4.7 kb by Northern blot anal., similar to human ecNOS mRNA. This suggests that porcine ecNOS is similar to human ecNOS in deduced amino acid sequence and structure.

IT **189642-78-2**
RL: BAC (Biological activity or effector, except adverse); BPR (Biological process); BSU (Biological study, unclassified); PRP (Properties); BIOL (Biological study); PROC (Process)
(amino acid sequence; mol. cloning, characterization and expression of nitric oxide synthase from porcine pulmonary artery endothelial cells)

REFERENCE COUNT: 23 THERE ARE 23 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L3 ANSWER 18 OF 29 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1996:445410 HCAPLUS
DOCUMENT NUMBER: 125:215533
TITLE: Cloning and characterization of murine endothelial constitutive nitric oxide synthase
AUTHOR(S): Gnanapandithen, Kumudini; Chen, Zhiqi; Kau, Cheng-Lin; Gorczynski, Reginald M.; Marsden, Philip A.
CORPORATE SOURCE: Renal Division and Department of Medicine, St. Michael's Hospital, University of Toronto, 1 King's College Circle, Rm. 7358, Medical Sciences Building, Toronto, ON, M5S 1A8, Can.
SOURCE: Biochimica et Biophysica Acta (1996), 1308(2), 103-106
CODEN: BBACAQ; ISSN: 0006-3002
PUBLISHER: Elsevier
DOCUMENT TYPE: Journal
LANGUAGE: English

AB Complementary DNA clones encoding mouse endothelial constitutive nitric oxide synthase (ecNOS) were isolated by plaque hybridization from a murine fetal cardiac .lambda.ZAP II cDNA expression library using a full-length human ecNOS cDNA as the hybridization probe. DNA sequence anal. indicates a 1202 amino acid protein showing significant sequence identity with human as well as bovine ecNOS.

IT **181494-64-4**
RL: PRP (Properties)
(amino acid sequence; cloning and characterization of murine endothelial constitutive nitric oxide synthase)

L3 ANSWER 19 OF 29 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1996:229061 HCAPLUS
DOCUMENT NUMBER: 124:281125
TITLE: Cloning and expression of bovine endothelial nitric oxide synthase cDNA
INVENTOR(S): Harrison, David G.; Alexander, R. Wayne; Murphy, T. J.; Nishida, Kenichi
PATENT ASSIGNEE(S): Daiichi Pharmaceutical Co., Ltd., Japan
SOURCE: U.S., 23 pp.
CODEN: USXXAM
DOCUMENT TYPE: Patent

LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 5498539	A	19960312	US 1992-908245	19920702

PRIORITY APPLN. INFO.: US 1992-908245 19920702

AB The cloning and sequence of the cDNA encoding bovine endothelial nitric oxide synthase (NOS) are described. The deduced amino acid sequence contains binding domains for calcium/calmodulin, FMN, FAD and NADPH. The enzyme has a mol. wt. of 133,413 Mr. The amino terminal portion of the enzyme exhibits a proline-rich region and several sites for proline-directed phosphorylation as well as a potential substrate site for acyl transferase. DNA probes prepd. from the nucleic acid sequence may be useful in research and diagnostically to det. the level of nitric oxide synthase mRNA expressed by endothelial cells both in cell culture and in intact tissues. These probes may also be useful for detecting genetic abnormalities. The NOS gene may be transfected into blood vessels in vivo for enhanced synthesis of nitric oxide synthase, resulting in increased prodn. of nitric oxide. The gene may also be transfected into host cells that do not normally express the enzyme for prodn. of endothelial NOS in large vols. The bovine NOS cDNA was expressed in COS-7 cells. Shear stress increased NOS mRNA and tumor necrosis factor .alpha. decreased NOS mRNA in bovine aortic endothelial cells.

IT **175675-39-5**
RL: PRP (Properties)
(amino acid sequence; cloning and expression of bovine endothelial nitric oxide synthase cDNA)

L3 ANSWER 20 OF 29 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1995:916668 HCAPLUS
DOCUMENT NUMBER: 123:332117
TITLE: Nitric oxide synthase expression vectors for use in gene therapy of blood vessel diseases
INVENTOR(S): Schrader, Juergen; Goedecke, Axel
PATENT ASSIGNEE(S): Germany
SOURCE: Ger. Offen., 28 pp.
CODEN: GWXXBX
DOCUMENT TYPE: Patent
LANGUAGE: German
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
DE 4411402	A1	19951005	DE 1994-4411402	19940331
WO 9527070	A1	19951012	WO 1995-EP1202	19950331
W: JP, US				
RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
EP 707655	A1	19960424	EP 1995-915834	19950331
EP 707655	B1	20000628		
R: DE, FR, GB, NL				
JP 08511172	T2	19961126	JP 1995-525413	19950331
US 6146887	A	20001114	US 1998-123708	19980728
US 6149936	A	20001121	US 1998-123624	19980728

PRIORITY APPLN. INFO.: DE 1994-4411402 A 19940331
WO 1995-EP1202 W 19950331

AB DNA expression vectors contg. a nitric oxide synthase coding region controlled by eukaryotic regulatory regions are claimed. Vector pSCMV-iNOS contg. the promoter/enhancer of the human cytomegalovirus immediate early protein gene, mouse inducible nitric oxide synthase cDNA, intron 2-exon 3-polyadenylation signal of rabbit globin gene, and

replication origin of SV40 virus was prepd. Using this vector, the effect of a local overexpression of the NO synthase cDNA on the proliferation of cells after endothelium injury in the rat restenosis model was examd.

IT **147883-95-2**
RL: PRP (Properties)
(amino acid sequence; nitric oxide synthase expression vectors for use in gene therapy of blood vessel diseases)

L3 ANSWER 21 OF 29 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1994:237202 HCAPLUS
DOCUMENT NUMBER: 120:237202
TITLE: Gene structure, polymorphism and mapping of the human endothelial nitric oxide synthase gene
AUTHOR(S): Nadaud, Sophie; Bonnardeaux, Alain; Lathrop, Mark; Soubrier, Florent
CORPORATE SOURCE: U36, Coll. France, Paris, 75005, Fr.
SOURCE: Biochemical and Biophysical Research Communications (1994), 198(3), 1027-33
CODEN: BBRCA9; ISSN: 0006-291X
DOCUMENT TYPE: Journal
LANGUAGE: English

AB Endothelium-derived relaxing factor (EDRF)/nitric oxide (NO) is synthesized from L-arginine by the endothelial, constitutive, NO synthase. To facilitate genetic studies, the authors have cloned the human endothelial NO synthase gene and detd. its structure. The gene is composed of 26 exons, ranging from 68 to 579 bp, and spans 22 kb. The authors detd. the transcription start point using human lung mRNA. No TATA-box was found at the expected distance from the transcription start point and several consensus sequences for transcription factors, including a shear-stress responsive element were identified in the 5'-flanking region. A highly polymorphic (CA) repeat within intron 13 was studied, allowing the precise genetic mapping of the gene to chromosome 7, within a 4 cM interval delimited by genethon markers AFM199Zd4 and AFM074Xg5.

IT **154339-18-1**, Genbank x76303-derived protein
RL: PRP (Properties)
(amino acid sequence of)

L3 ANSWER 22 OF 29 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1993:664179 HCAPLUS
DOCUMENT NUMBER: 119:264179
TITLE: Cloning of endothelial nitric oxide synthase (ENOC) and use of ENOC in diagnosis and therapy
INVENTOR(S): Bloch, Kenneth D.; Janssens, Stefan P.; Bloch, Donald B.
PATENT ASSIGNEE(S): General Hosp. Corp., USA
SOURCE: PCT Int. Appl., 34 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9318156	A1	19930916	WO 1993-US1951	19930305
W: AU, CA, JP				
RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
AU 9337891	A1	19931005	AU 1993-37891	19930305
PRIORITY APPLN. INFO.:			US 1992-846558	19920305
			US 1993-27071	19930304
			WO 1993-US1951	19930305

AB The cDNA for human ENOC is cloned and sequenced. ENOC may be used to treat hypertension, to relax smooth muscles, to activate guanylate

cyclase, and to inhibit platelet aggregation (no data). A method for detg. whether a mammal is at risk for a circulatory disorder comprises detg. the sequence of or detg. the level of expression of the ENOC gene (no data). RNA blot hybridization indicated that the ENOC gene was expressed in vein cells as well as lung, kidney, and spleen. 3T3 cells expressing the ENOC gene exhibited NADPH diaphorase activity.

IT **151553-81-0**
RL: PRP (Properties)
(amino acid sequence of)

L3 ANSWER 23 OF 29 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1993:642406 HCAPLUS
DOCUMENT NUMBER: 119:242406
TITLE: Structure and chromosomal localization of the human constitutive endothelial nitric oxide synthase gene
AUTHOR(S): Marsden, Philip A.; Heng, Henry H. Q.; Scherer, Stephen W.; Stewart, Robert J.; Hall, Anne V.; Shi, Xiao Mei; Tsui, Lap Chee; Schappert, Keith T.
CORPORATE SOURCE: Dep. Med., St. Michael's Hosp., Toronto, ON, M5S 1A8, Can.
SOURCE: Journal of Biological Chemistry (1993), 268(23), 17478-88
CODEN: JBCHA3; ISSN: 0021-9258
DOCUMENT TYPE: Journal
LANGUAGE: English

AB Endothelial nitric oxide (NO) synthase is a unique NO synthase isoform that is expressed constitutively by vascular endothelium both in vivo and in vitro and is believed essential to local vascular homeostasis. This calcium/calmodulin-dependent isoform is distinct from neuronal NO synthase. Genomic clones encoding the human endothelial NO synthase were isolated and the structural organization of the gene was detd. The gene contains 26 exons spanning .apprxeq.21 kilobases of genomic DNA, encodes a mRNA of 4052 nucleotides, and is present as a single copy in the haploid human genome. Characterization of 5'-flanking genomic regions indicates that the endothelial NO synthase promoter is "TATA-less" and exhibits proximal promoter elements consistent with a constitutively expressed gene that is found in endothelial cells, namely Sp1 and GATA motifs. The 5'-flanking region contains putative AP-1, AP-2, NF-1, heavy metal, acute-phase response shear stress, and sterol-regulatory cis-elements. The human endothelial NO synthase gene was assigned to the 7q35 .fwdarw. 7q36 region of chromosome 7 by Southern blot hybridization of human-rodent somatic cell hybrid lines and fluorescence in situ hybridization, whereas human neuronal NO synthase localized to the 12q24.2 region of chromosome 12.

IT **148466-32-4**
RL: PROC (Process)
(amino acid sequence and constitutive expression of)

L3 ANSWER 24 OF 29 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1993:510246 HCAPLUS
DOCUMENT NUMBER: 119:110246
TITLE: Molecular cloning of constitutive endothelial nitric oxide synthase: evidence for a family of related genes
AUTHOR(S): Michel, Thomas; Lamas, Santiago
CORPORATE SOURCE: Harvard Med. Sch., Brigham Women's Hosp., Boston, MA, 02115, USA
SOURCE: Journal of Cardiovascular Pharmacology (1992), 20(S12), S45-S49
CODEN: JCPCDT; ISSN: 0160-2446
DOCUMENT TYPE: Journal
LANGUAGE: English

AB Nitric oxide (NO) is synthesized in vascular endothelial cells, and

appears to play an important role in the control of blood pressure and platelet aggregation. A detailed understanding of the regulation of NO synthesis by endothelial cells has been hampered by the lack of mol. clones for endothelial NO synthase; the authors now report the isolation and characterization of such clones. The constitutive NO synthases present in endothelial cells and in brain share common biochem. and pharmacol. features. NO synthase was purified from bovine brain, and the amino acid sequences of several tryptic peptides were detd. These sequence data were utilized to design PCR-generated NO synthase cDNA probes, which were used to isolate clones encoding NO synthase from a bovine aortic endothelial cell (BAEC) cDNA library. A full-length NO synthase cDNA clone was isolated, representing a protein of 1205 amino acids with a mol. mass of 133 kDa. The deduced amino acid sequence of the BAEC NO synthase cDNA differs at numerous residues from the sequence detd. for the purified bovine brain protein, and shows 50-60% sequence identity with recently isolated mol. clones for murine macrophage and rat brain NO synthase isoforms. Bovine genomic Southern blots probed with bovine brain and BAEC NO synthase cDNA probes identify distinct bands, indicating that these cDNAs are the products of different genes. Prolonged treatment of BAEC with the cytokine TNF.alpha., which results in a marked increase in NO synthase activity, is assocd. with a decrease in the abundance of the 4.8-kb BAEC NO synthase transcript. The increase in BAEC NO synthase activity induced by TNF.alpha. is thus likely to involve posttranscriptional mechanisms, or the induction of a distinct endothelial NO synthase isoform.

IT **147883-59-8**
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); PRP (Properties); BIOL (Biological study)
(amino acid sequence of, complete)

L3 ANSWER 25 OF 29 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1993:466433 HCAPLUS
DOCUMENT NUMBER: 119:66433
TITLE: Molecular cloning and characterization of the constitutive bovine aortic endothelial cell nitric oxide synthase
AUTHOR(S): Nishida, Kenichi; Harrison, David G.; Navas, Jorge P.; Fisher, Ari A.; Dockery, Sheila P.; Uematsu, Masaaki; Nerem, Robert M.; Alexander, R. Wayne; Murphy, T. J.
CORPORATE SOURCE: Sch. Med., Emory Univ., Atlanta, GA, 30322, USA
SOURCE: Journal of Clinical Investigation (1992), 90(5), 2092-6
CODEN: JCINAO; ISSN: 0021-9738
DOCUMENT TYPE: Journal
LANGUAGE: English

AB The constitutive endothelial cell nitric oxide synthase (NOS) importantly regulates vascular homeostasis. To gain understanding of this enzyme, a pEF BOS cDNA library of 5 x 105 clones was prepd. from bovine aortic endothelial cells (BAEC) and screened with a 2.8-kb cDNA BamHI fragment of rat brain NOS. Clone pBOS13 expressed NOS activity when transfected into COS-7 cells. Sequence anal. revealed sequences compatible with binding domains for calcium/calmodulin, FMN, flavin adenine nucleotide, and NADPH. The deduced amino acid sequence revealed a protein with a relative mol mass of 133,286, which is 58% homologous to the rat cerebellar NOS and 51% homologous to the mouse macrophage NOS. The N-terminal portion of the protein exhibits several characteristics peculiar to the endothelial cell NOS. These include a proline-rich region and several potential sites for proline-directed phosphorylation as well as a potential substrate site for acyl transferase. Northern hybridization to mRNA from cultured BAEC revealed an abundant 4.8-kb message, which was not increased by coincubation with tumor necrosis factor .alpha., but was markedly increase by exposure to shear stress for 24 h. The unique features of the endothelial cell NO synthase, particularly in the N-terminal portion of

the mol., may provide for novel regulatory influences of enzyme activity and localization.

IT **147883-59-8**
RL: PRP (Properties); BIOL (Biological study)
(amino acid sequence of, complete)

L3 ANSWER 26 OF 29 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1993:444105 HCAPLUS
DOCUMENT NUMBER: 119:44105
TITLE: Molecular cloning and characterization of human endothelial nitric oxide synthase
AUTHOR(S): Marsden, Philip A.; Schappert, Keith T.; Chen, Hai Sheine; Flowers, Michele; Sundell, Cynthia L.; Wilcox, Josiah N.; Lamas, Santiago; Michel, Thomas
CORPORATE SOURCE: Dep. Med., St. Michael's Hosp., Toronto, ON, Can.
SOURCE: FEBS Letters (1992), 307(3), 287-93
CODEN: FEBLAL; ISSN: 0014-5793
DOCUMENT TYPE: Journal
LANGUAGE: English

AB The constitutive calcium/calmodulin-dependent nitric oxide (NO) synthase expressed in vascular endothelium shares common biochem. and pharmacol. properties with neuronal NO synthase. However, recent cloning and mol. characterization of NO synthase from bovine endothelial cells indicated the existence of a family of constitutive NO synthase. Human endothelial NO synthase gene was cloned and the amino acid sequence was detd. The cDNA clones predict a protein of 1203 amino acids sharing 94% identity with the bovine endothelial protein, but only 60% identity with the rat brain NO synthase isoform. Northern blot anal. with an endothelial-derived cDNA identified a 4.6-4.8 kb mRNA transcript in HUVEC (human umbilical vein endothelial cells) and in situ hybridization localized transcripts to vascular endothelium but not neuronal tissue.

IT **148466-32-4**
RL: PRP (Properties); BIOL (Biological study)
(amino acid sequence of, complete)

L3 ANSWER 27 OF 29 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1993:403860 HCAPLUS
DOCUMENT NUMBER: 119:3860
TITLE: Cloning and expression of a cDNA encoding human endothelium-derived relaxing factor/nitric oxide synthase
AUTHOR(S): Janssens, Stefan P.; Shimouchi, Akito; Quertermous, Thomas; Bloch, Donald B.; Bloch, Kenneth D.
CORPORATE SOURCE: Dep. Med., Harvard Med. Sch., Boston, MA, 02114, USA
SOURCE: Journal of Biological Chemistry (1992), 267(21), 14519-22
CODEN: JBCHA3; ISSN: 0021-9258
DOCUMENT TYPE: Journal
LANGUAGE: English

AB Nitric oxide, which accounts for the biol. activity of endothelium-derived relaxing factor (EDRF), is synthesized in endothelial cells from L-arginine by nitric oxide synthase (NOS). Here the cloning and functional expression of a cDNA encoding human endothelial NOS is reported. Oligonucleotides corresponding to amino acid sequences shared by cytochrome P 450 reductase and the recently identified brain NOS were synthesized to amplify a partial cDNA encoding a bovine endothelial cell NOS-related protein. This partial cDNA was used to isolate a cDNA encoding a human vascular endothelial NOS. The translated human protein is 1294 amino acids long and shares 52% of its amino acid sequence with brain NOS. Using RNA blot hybridization, abundant endothelial NOS mRNA was detected in unstimulated human umbilical vein endothelial cells. To det. the functional activity of the endothelial protein the cDNA was ligated into an expression vector and transfected into NIH3T3 cells.

Cells expressing this cDNA contained abundant NADPH diaphorase activity, a histochem. marker for NOS. In co-culture assays, nitric oxide prodn. by transfected cells increased guanylate cyclase activity in reporter rat fetal lung fibroblasts. In addn., NOS-catalyzed conversion of arginine to citrulline in transfected cells was significantly increased by A23187, a calcium ionophore. Isolation of a cDNA encoding a calcium-regulated, constitutively expressed human endothelial NOS, capable of producing EDRF in blood vessels, will accelerate the characterization of the role of this enzyme in normal and abnormal endothelial regulation of vascular tone.

IT **147979-88-2**
RL: PRP (Properties); BIOL (Biological study)
(amino acid sequence of, complete)

L3 ANSWER 28 OF 29 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1993:250532 HCAPLUS
DOCUMENT NUMBER: 118:250532
TITLE: Molecular cloning and expression of a cDNA encoding endothelial cell nitric oxide synthase
AUTHOR(S): Sessa, William C.; Harrison, Jeffrey K.; Barber, Cynthia M.; Zeng, Dewan; Durieux, Marcel E.; D'Angelo, Drew D.; Lynch, Kevin R.; Peach, Michael J.
CORPORATE SOURCE: Sch. Med., Univ. Virginia, Charlottesville, VA, 22908, USA
SOURCE: Journal of Biological Chemistry (1992), 267(22), 15274-6
CODEN: JBCHA3; ISSN: 0021-9258
DOCUMENT TYPE: Journal
LANGUAGE: English

AB Here, the mol. cloning of a cDNA encoding the constitutive calcium-calmodulin (Ca2+/CaM)-regulated nitric oxide synthase (ECNOS) is reported. A full-length ECNOS clone was isolated by screening a bovine aortic endothelial cell cDNA library using a fragment of rat brain NO (bNOS) cDNA. This cDNA has an open reading frame of 3615 nucleotides encoding a 1205-amino acid protein. Membranes prepd. from COS cells transfected with the ECNOS cDNA demonstrated NADPH- and Ca2+/CaM-dependent conversion of L-, but not D-, arginine to NO and citrulline that was inhibited by NG-nitro-L-arginine Me ester. Comparison of the deduced amino acid sequence of ECNOS to the bNOS and macrophage NOS (Mac-NOS) sequences revealed 57 and 50% identity, resp. In addn., ECNOS contains a unique N-myristylation consensus sequence (not shared by bNOS or Mac-NOS) that may explain its membrane localization.

IT **147883-95-2**
RL: PRP (Properties); BIOL (Biological study)
(amino acid sequence of, complete)

L3 ANSWER 29 OF 29 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1993:250527 HCAPLUS
DOCUMENT NUMBER: 118:250527
TITLE: Endothelial nitric oxide synthase: molecular cloning and characterization of a distinct constitutive enzyme isoform
AUTHOR(S): Lamas, Santiago; Marsden, Philip A.; Li, Gordon K.; Tempst, Paul; Michel, Thomas
CORPORATE SOURCE: Cardiovasc. Div., Brigham and Women's Hosp., Boston, MA, 02115, USA
SOURCE: Proceedings of the National Academy of Sciences of the United States of America (1992), 89(14), 6348-52
CODEN: PNASA6; ISSN: 0027-8424
DOCUMENT TYPE: Journal
LANGUAGE: English

AB A detailed understanding of the regulation of nitric oxide (NO) synthesis by endothelial cells has been hampered by the lack of mol. clones for endothelial NO synthase; the isolation and characterization of such clones

is reported herein. The constitutive NO synthases present in endothelial cells in brain share common biochem. and pharmacol. features. NO synthase was purified from bovine brain and the amino acid sequence of several tryptic peptides detd. The sequence of the bovine brain peptides is nearly identical to the deduced amino acid sequence previously detd. for the rat brain NO synthase. These sequence data were utilized to design PCR-generated NO synthase cDNA probes, which were used to isolate clones encoding NO synthase from a bovine aortic endothelial cell (BAEC) cDNA library. A full-length NO synthase cDNA clone was isolated, representing a protein of 1205 amino acids with a mol. mass of 133 kDa; transfection of this clone in a heterologous expression system demonstrated the expected enzymic activity. The deduced amino acid sequence of the BAEC NO synthase cDNA differs at numerous residues from the sequence detd. for the purified bovine brain protein and shows 50-60% sequence identity with recently isolated mol. clones for murine macrophage and rat brain NO synthase isoforms. Bovine genomic Southern blots probed with bovine brain and BAEC NO synthase cDNA probes identify distinct bands, indicating that these cDNAs are the products of different genes. Prolonged treatment of BAECs with the cytokine tumor necrosis factor .alpha., which was previously shown to markedly increase NO synthase activity, is assocd. with a decrease in the abundance of the 4.8-kilobase BAEC NO synthase transcript. The increase in BAEC NO synthase activity induced by tumor necrosis factor .alpha. is thus likely to involve posttranscriptional mechanisms or the induction of a distinct endothelial NO synthase isoform.

IT **147883-59-8**
RL: PRP (Properties); BIOL (Biological study)
(amino acid sequence of, complete)

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=>

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=> d .seq l1 1-41

L1 ANSWER 1 OF 41 REGISTRY COPYRIGHT 2004 ACS on STN
RN 663965-84-2 REGISTRY

CN INDEX NAME NOT YET ASSIGNED
SQL 1203

SEQ 1151 DQQRYHEDIF GLTLRTQEVT SRIRTQSFSL QERQLRGAVP WAFDPPGSDT
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HITS AT: 1172-1183

RELATED SEQUENCES AVAILABLE WITH SEQLINK

REFERENCE 1: 140:212008

L1 ANSWER 2 OF 41 REGISTRY COPYRIGHT 2004 ACS on STN
RN 663233-94-1 REGISTRY
CN Synthase, nitric oxide, 3 (synthetic human) (9CI) (CA INDEX NAME)
OTHER NAMES:
CN 1: PN: WO2004016764 SEQID: 1 claimed protein
SQL 1203

SEQ 1151 DQQRYHEDIF GLTLRTQEVT SRIRTQSFSL QERQLRGAVP WAFDPPGSDT
========= ===

HITS AT: 1172-1183

RELATED SEQUENCES AVAILABLE WITH SEQLINK

REFERENCE 1: 140:194407

L1 ANSWER 3 OF 41 REGISTRY COPYRIGHT 2004 ACS on STN
RN 657442-93-8 REGISTRY
CN 10: PN: US6689557 SEQID: 10 unclaimed protein (9CI) (CA INDEX NAME)
SQL 1205

SEQ 1151 LRDQQRYHED IFGLTLRTQE VTSRIRTQSF SLQERHLRGA VPWAFDPPGP
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HITS AT: 1174-1185

RELATED SEQUENCES AVAILABLE WITH SEQLINK

REFERENCE 1: 140:177082

L1 ANSWER 4 OF 41 REGISTRY COPYRIGHT 2004 ACS on STN
RN 654291-71-1 REGISTRY
CN Adipocyte-specific protein (human clone WO2004011618-SEQID-573) (9CI) (CA INDEX NAME)
OTHER NAMES:
CN 346: PN: WO2004011618 SEQID: 573 claimed protein
SQL 1203

SEQ 1151 DQQRYHEDIF GLTLRTQEVT SRIRTQSFSL QERQLRGAVP WAFDPPGSDT
========= ===

HITS AT: 1172-1183

RELATED SEQUENCES AVAILABLE WITH SEQLINK

REFERENCE 1: 140:158645

L1 ANSWER 5 OF 41 REGISTRY COPYRIGHT 2004 ACS on STN
RN 654291-70-0 REGISTRY
CN Adipocyte-specific protein (mouse clone WO2004011618-SEQID-572) (9CI) (CA INDEX NAME)
OTHER NAMES:
CN 345: PN: WO2004011618 SEQID: 572 claimed protein
SQL 1202

```
SEQ   1151 QQRYHEDIFG LTLRTQEVTS RIRTQSFSLQ ERQLRGAVPW SFDPPGPEIP
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HITS AT:   1171-1182

**RELATED SEQUENCES AVAILABLE WITH SEQLINK**

REFERENCE   1:  140:158645

L1   ANSWER 6 OF 41  REGISTRY  COPYRIGHT 2004 ACS on STN
RN   624807-26-7  REGISTRY
CN   GenBank AAH52636 (9CI)  (CA INDEX NAME)
OTHER NAMES:
CN   GenBank AAH52636 (TRANSLATED FROM: GenBank BC052636)
SQL  1202

SEQ   1151 QQRYHEDIFG LTLRTQEVTS RIRTQSFSLQ ERQLRGAVPW SFDPPGPEIP
                                 ========== ==
HITS AT:   1171-1182

L1   ANSWER 7 OF 41  REGISTRY  COPYRIGHT 2004 ACS on STN
RN   624605-77-2  REGISTRY
CN   GenBank AAP22420 (9CI)  (CA INDEX NAME)
OTHER NAMES:
CN   GenBank AAP22420 (TRANSLATED FROM: GenBank AY266137)
SQL  1205

SEQ   1151 LRDQQRYHED IFGLTLRTQE VTSRIRTQSF SLQERHLRGA VPWAFDPPGP
                                   ======= =====
HITS AT:   1174-1185

L1   ANSWER 8 OF 41  REGISTRY  COPYRIGHT 2004 ACS on STN
RN   624280-75-7  REGISTRY
CN   GenBank AAH63294 (9CI)  (CA INDEX NAME)
OTHER NAMES:
CN   GenBank AAH63294 (TRANSLATED FROM: GenBank BC063294)
SQL  1203

SEQ   1151 DQQRYHEDIF GLTLRTQEVT SRIRTQSFSL QERQLRGAVP WAFDPPGSDT
                                  ========= ===
HITS AT:   1172-1183

L1   ANSWER 9 OF 41  REGISTRY  COPYRIGHT 2004 ACS on STN
RN   623087-30-9  REGISTRY
CN   GenBank AAO47084 (9CI)  (CA INDEX NAME)
OTHER NAMES:
CN   GenBank AAO47084 (TRANSLATED FROM: GenBank AY179960)
SQL  1209

SEQ   1151 VIGVLRDQQR YHEDIFGLTL RTQEVTSRIR TQSFSLQERQ LRGAVPWAFD
                                     === =========
HITS AT:   1178-1189

L1   ANSWER 10 OF 41  REGISTRY  COPYRIGHT 2004 ACS on STN
RN   590522-27-3  REGISTRY
CN   Synthase, nitric oxide, 3 [178-phenylalanine] (human) (9CI)  (CA INDEX
     NAME)
SQL  1203

SEQ   1151 DQQRYHEDIF GLTLRTQEVT SRIRTQSFSL QERQLRGAVP WAFDPPGSDT
                                  ========= ===
HITS AT:   1172-1183

REFERENCE   1:  139:226481
```

L1 ANSWER 11 OF 41 REGISTRY COPYRIGHT 2004 ACS on STN
RN 590522-26-2 REGISTRY
CN Synthase, nitric oxide, 3 [178-tyrosine] (human) (9CI) (CA INDEX NAME)
SQL 1203

SEQ 1151 DQQRYHEDIF GLTLRTQEVT SRIRTQSFSL QERQLRGAVP WAFDPPGSDT
========== ===
HITS AT: 1172-1183

REFERENCE 1: 139:226481

L1 ANSWER 12 OF 41 REGISTRY COPYRIGHT 2004 ACS on STN
RN 590522-19-3 REGISTRY
CN Synthase, nitric oxide, 3 (human) (9CI) (CA INDEX NAME)
SQL 1203

SEQ 1151 DQQRYHEDIF GLTLRTQEVT SRIRTQSFSL QERQLRGAVP WAFDPPGSDT
========== ===
HITS AT: 1172-1183

RELATED SEQUENCES AVAILABLE WITH SEQLINK

REFERENCE 1: 139:226481

L1 ANSWER 13 OF 41 REGISTRY COPYRIGHT 2004 ACS on STN
RN 540830-45-3 REGISTRY
CN Pain-regulated protein (rat clone WO03016475-SEQID-12444) (9CI) (CA INDEX NAME)
OTHER NAMES:
CN 1364: PN: WO03016475 SEQID: 12444 claimed protein
SQL 919

SEQ 851 QTVQRILATE GSMELDEAGD VIGVLRDQQR YHEDIFGLTL RTQEVTSRIR
===
901 TQSFSLQERQ LRGAVPWSF
==========
HITS AT: 898-909

REFERENCE 1: 139:31810

L1 ANSWER 14 OF 41 REGISTRY COPYRIGHT 2004 ACS on STN
RN 507478-82-2 REGISTRY
CN L-Leucine, L-cysteinyl-L-threonyl-L-seryl-L-arginyl-L-isoleucyl-L-arginyl-L-threonyl-L-glutaminyl-L-seryl-L-phenylalanyl-L-seryl-L-leucyl-L-glutaminyl-L-.alpha.-glutamyl-L-arginyl-L-glutaminyl- (9CI) (CA INDEX NAME)
OTHER NAMES:
CN 121: PN: US20030068652 SEQID: 119 unclaimed sequence
SQL 17

SEQ 1 CTSRIRTQSF SLQERQL
======== =====
HITS AT: 4-15

REFERENCE 1: 138:300159

L1 ANSWER 15 OF 41 REGISTRY COPYRIGHT 2004 ACS on STN
RN 493628-55-0 REGISTRY
CN Protein (mouse strain C57BL/6J clone 6030422B05 1202-amino acid) (9CI) (CA INDEX NAME)
OTHER NAMES:
CN GenBank BAC37052

CN GenBank BAC37052 (Translated from: GenBank AK077896)
SQL 1202

SEQ 1151 QQRYHEDIFG LTLRTQEVTS RIRTQSFSLQ ERQLRGAVPW SFDPPGPEIP
========== ==
HITS AT: 1171-1182

REFERENCE 1: 138:164527

L1 ANSWER 16 OF 41 REGISTRY COPYRIGHT 2004 ACS on STN
RN 487698-45-3 REGISTRY
CN GenBank CAA09494 (9CI) (CA INDEX NAME)
OTHER NAMES:
CN GenBank CAA09494 (Translated from: GenBank AJ011116)
SQL 242

SEQ 201 QQRYHEDIFG LTLRTQEVTS RIRTQSFSLQ ERQLRGAVPW SF
========== ==
HITS AT: 221-232

L1 ANSWER 17 OF 41 REGISTRY COPYRIGHT 2004 ACS on STN
RN 487546-15-6 REGISTRY
CN GenBank CAA02941 (9CI) (CA INDEX NAME)
OTHER NAMES:
CN GenBank CAA02941 (Translated from: GenBank A46717)
SQL 1205

SEQ 1151 LRDQQRYHED IFGLTLRTQE VTSRIRTQSF SLQERHLRGA VPWAFDPPGP
======= =====
HITS AT: 1174-1185

RELATED SEQUENCES AVAILABLE WITH SEQLINK

L1 ANSWER 18 OF 41 REGISTRY COPYRIGHT 2004 ACS on STN
RN 484107-30-4 REGISTRY
CN GenBank AAD29753 (9CI) (CA INDEX NAME)
OTHER NAMES:
CN GenBank AAD29753 (Translated from: GenBank AF146041)
SQL 1206

SEQ 1151 VLRDQQRYHE DIFGLTLRTQ EVTSRIRTQS FSLQERHLRG AVPWAFDLPG
====== ======
HITS AT: 1175-1186

RELATED SEQUENCES AVAILABLE WITH SEQLINK

L1 ANSWER 19 OF 41 REGISTRY COPYRIGHT 2004 ACS on STN
RN 484107-29-1 REGISTRY
CN GenBank AAD29752 (9CI) (CA INDEX NAME)
OTHER NAMES:
CN GenBank AAD29752 (Translated from: GenBank AF146040)
SQL 1206

SEQ 1151 VLRDQQRYHE DIFGLTLRTQ EVTSRIRTQS FSLQERHLRG AVPWAFDLPG
====== ======
HITS AT: 1175-1186

RELATED SEQUENCES AVAILABLE WITH SEQLINK

L1 ANSWER 20 OF 41 REGISTRY COPYRIGHT 2004 ACS on STN
RN 481455-45-2 REGISTRY
CN GenBank AAA84933 (9CI) (CA INDEX NAME)
OTHER NAMES:

CN GenBank AAA84933 (Translated from: GenBank U33832)
SQL 175

SEQ 101 RILATEGNME LDEAGDVIGV LRDQQRYHED IFGLTLRTQE VTSRIRTQSF
=======

151 SLQERHLRGA VPWTFDPPGP DTPGP
=====

HITS AT: 144-155

L1 ANSWER 21 OF 41 REGISTRY COPYRIGHT 2004 ACS on STN
RN 481423-42-1 REGISTRY
CN GenBank AAA30669 (9CI) (CA INDEX NAME)
OTHER NAMES:
CN GenBank AAA30669 (Translated from: GenBank M95674)
SQL 1205

SEQ 1151 LRDQQRYHED IFGLTLRTQE VTSRIRTQSF SLQERHLRGA VPWAFDPPGP
======= =====

HITS AT: 1174-1185

RELATED SEQUENCES AVAILABLE WITH SEQLINK

L1 ANSWER 22 OF 41 REGISTRY COPYRIGHT 2004 ACS on STN
RN 481423-40-9 REGISTRY
CN GenBank AAA30667 (9CI) (CA INDEX NAME)
OTHER NAMES:
CN GenBank AAA30667 (Translated from: GenBank M99057)
SQL 1205

SEQ 1151 LRDQQRYHED IFGLTLRTQE VTSRIRTQSF SLQERHLRGA VPWAFDPPGP
======= =====

HITS AT: 1174-1185

RELATED SEQUENCES AVAILABLE WITH SEQLINK

L1 ANSWER 23 OF 41 REGISTRY COPYRIGHT 2004 ACS on STN
RN 481421-78-7 REGISTRY
CN GenBank AAA30494 (9CI) (CA INDEX NAME)
OTHER NAMES:
CN GenBank AAA30494 (Translated from: GenBank M89952)
SQL 1205

SEQ 1151 LRDQQRYHED IFGLTLRTQE VTSRIRTQSF SLQERHLRGA VPWAFDPPGP
======= =====

HITS AT: 1174-1185

RELATED SEQUENCES AVAILABLE WITH SEQLINK

L1 ANSWER 24 OF 41 REGISTRY COPYRIGHT 2004 ACS on STN
RN 481242-54-0 REGISTRY
CN GenBank AAA36374 (9CI) (CA INDEX NAME)
OTHER NAMES:
CN GenBank AAA36374 (Translated from: GenBank L26914)
SQL 1203

SEQ 1151 DQQRYHEDIF GLTLRTQEVT SRIRTQSFSL QERQLRGAVP WAFDPPGSDT
========= ===

HITS AT: 1172-1183

RELATED SEQUENCES AVAILABLE WITH SEQLINK

L1 ANSWER 25 OF 41 REGISTRY COPYRIGHT 2004 ACS on STN
RN 481242-52-8 REGISTRY

CN GenBank AAA36372 (9CI) (CA INDEX NAME)
OTHER NAMES:
CN GenBank AAA36372 (Translated from: GenBank M95296)
SQL 1203

SEQ 1151 DQQRYHEDIF GLTLRTQEVT SRIRTQSFSL QERQLRGAVP WAFDPPGSDT
========= ===
HITS AT: 1172-1183

RELATED SEQUENCES AVAILABLE WITH SEQLINK

L1 ANSWER 26 OF 41 REGISTRY COPYRIGHT 2004 ACS on STN
RN 481242-47-1 REGISTRY
CN GenBank AAA36365 (9CI) (CA INDEX NAME)
OTHER NAMES:
CN GenBank AAA36365 (Translated from: GenBank L10709)
SQL 1203

SEQ 1151 DQQRYHEDIF GLTLRTQEVT SRIRTQSFSL QERQLRGAVP WAFDPPGSDT
========= ===
HITS AT: 1172-1183

RELATED SEQUENCES AVAILABLE WITH SEQLINK

L1 ANSWER 27 OF 41 REGISTRY COPYRIGHT 2004 ACS on STN
RN 481150-29-2 REGISTRY
CN GenBank BAA05652 (9CI) (CA INDEX NAME)
OTHER NAMES:
CN GenBank BAA05652 (Translated from: GenBank D26607)
SQL 1204

SEQ 1151 QDQQRYHEDI FGLTLRTQEV TSRIRTQSFS LQERQLRGAV PWAFDPPGSD
======== ====
HITS AT: 1173-1184

L1 ANSWER 28 OF 41 REGISTRY COPYRIGHT 2004 ACS on STN
RN 480789-13-7 REGISTRY
CN GenBank AAK83389 (9CI) (CA INDEX NAME)
OTHER NAMES:
CN GenBank AAK83389 (Translated from: GenBank AF400594)
SQL 1203

SEQ 1151 DQQRYHEDIF GLTLRTQEVT SRIRTQSFSL QERQLRGAVP WAFDPPGSDT
========= ===
HITS AT: 1172-1183

RELATED SEQUENCES AVAILABLE WITH SEQLINK

L1 ANSWER 29 OF 41 REGISTRY COPYRIGHT 2004 ACS on STN
RN 479898-71-0 REGISTRY
CN GenBank AAM74944 (9CI) (CA INDEX NAME)
OTHER NAMES:
CN GenBank AAM74944 (Translated from: GenBank AF519768)
SQL 1203

SEQ 1151 DQQRYHEDIF GLTLRTQEVT SRIRTQSFSL QERQLRGAVP WAFDPPGSDT
========= ===
HITS AT: 1172-1183

RELATED SEQUENCES AVAILABLE WITH SEQLINK

L1 ANSWER 30 OF 41 REGISTRY COPYRIGHT 2004 ACS on STN
RN 391971-44-1 REGISTRY

CN Nitric oxide synthase (human) (9CI) (CA INDEX NAME)
OTHER NAMES:
CN 3573: PN: WO03091391 FIGURE: 20 unclaimed protein
CN GenBank AAA36364
CN GenBank AAA36364 (Translated from: GenBank M93718)
SQL 1203

SEQ 1151 DQQRYHEDIF GLTLRTQEVT SRIRTQSFSL QERQLRGAVP WAFDPPGSDT
========== ===
HITS AT: 1172-1183

RELATED SEQUENCES AVAILABLE WITH SEQLINK

REFERENCE 1: 139:363045

REFERENCE 2: 136:146104

L1 ANSWER 31 OF 41 REGISTRY COPYRIGHT 2004 ACS on STN
RN 302776-25-6 REGISTRY
CN L-Alanine, L-arginyl-L-isoleucyl-L-arginyl-L-threonyl-L-glutaminyl-L-seryl-L-phenylalanyl-L-seryl-L-leucyl-L-glutaminyl-L-.alpha.-glutamyl-L-arginyl-L-histidyl-L-leucyl-L-arginylglycyl-L-alanyl-L-valyl-L-prolyl-L-tryptophyl- (9CI) (CA INDEX NAME)
OTHER NAMES:
CN 1: PN: WO0062605 SEQID: 8 claimed protein
SQL 21

SEQ 1 RIRTQSFSLQ ERHLRGAVPW A
========== ==
HITS AT: 1-12

REFERENCE 1: 133:317552

L1 ANSWER 32 OF 41 REGISTRY COPYRIGHT 2004 ACS on STN
RN 242798-09-0 REGISTRY
CN Synthase, nitric oxide (Canis familiaris gene NOS) (9CI) (CA INDEX NAME)
OTHER NAMES:
CN GenBank AAD52161
CN GenBank AAD52161 (Translated from: GenBank AF143503)
SQL 1205

SEQ 1151 LRDQQRYHED IFGLTLRTQE VTSRIRTQSF SLQERHLRGA VPWALDPPGP
======= =====
HITS AT: 1174-1185

REFERENCE 1: 131:209930

L1 ANSWER 33 OF 41 REGISTRY COPYRIGHT 2004 ACS on STN
RN 189642-78-2 REGISTRY
CN Synthase, nitric oxide (swine clone pcDNA-PecNOS) (9CI) (CA INDEX NAME)
OTHER NAMES:
CN GenBank AAB39539
CN GenBank AAB39539 (Translated from: GenBank U59924)
CN Nitric oxide synthase (swine clone pcDNA-PecNOS)
SQL 1205

SEQ 1151 LRDQQRYHED IFGLTLRTQE VTSRIRTQSF SLQERHLRGA VPWTFDPPGP
======= =====
HITS AT: 1174-1185

REFERENCE 1: 126:327411

L1 ANSWER 34 OF 41 REGISTRY COPYRIGHT 2004 ACS on STN

RN 181494-64-4 REGISTRY
CN Synthetase, nitric oxide (mouse endothelium) (9CI) (CA INDEX NAME)
OTHER NAMES:
CN GenBank AAC52766
CN GenBank AAC52766 (Translated from: GenBank U53142)
CN Nitric oxide synthetase (mouse endothelium)
SQL 1202

SEQ 1151 QQRYHEDIFG LTLRTQEVTS RIRTQSFSLQ ERQLRGAVPW SFDPPGPEIP
==========

HITS AT: 1171-1182

RELATED SEQUENCES AVAILABLE WITH SEQLINK

REFERENCE 1: 125:215533

L1 ANSWER 35 OF 41 REGISTRY COPYRIGHT 2004 ACS on STN
RN 175675-39-5 REGISTRY
CN Synthetase, nitric oxide (cattle clone pBOS13) (9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN Synthetase, nitric oxide (ox clone pBOS13)
SQL 1216

SEQ 1151 ELDEAGDVIG VLRDQQRYHE DIFGLTLRTQ EVTSRIRTQS FSLQERHLRG
====== ======

HITS AT: 1185-1196

REFERENCE 1: 124:281125

L1 ANSWER 36 OF 41 REGISTRY COPYRIGHT 2004 ACS on STN
RN 154339-18-1 REGISTRY
CN Synthetase, nitric oxide (human clone 2a/2b/17a reduced) (9CI) (CA INDEX NAME)
OTHER NAMES:
CN GenBank CAA53950
CN GenBank CAA53950 (Translated from: GenBank X76303)
SQL 1203

SEQ 1151 DQQRYHEDIF GLTLRTQEVT SRIRTQSFSL QERQLRGAVP WAFEPPGSDT
========== ===

HITS AT: 1172-1183

REFERENCE 1: 120:237202

L1 ANSWER 37 OF 41 REGISTRY COPYRIGHT 2004 ACS on STN
RN 151553-81-0 REGISTRY
CN Synthetase, nitric oxide (human endothelial cell reduced) (9CI) (CA INDEX NAME)
OTHER NAMES:
CN Nitric oxide synthase (human endothelial cell)
SQL 1193

SEQ 1151 DQQRYHEDIF GLTLRTQEVT SRIRTQSFSL QERQLRGAVP WAF
========== ===

HITS AT: 1172-1183

REFERENCE 1: 119:264179

L1 ANSWER 38 OF 41 REGISTRY COPYRIGHT 2004 ACS on STN
RN 148466-32-4 REGISTRY
CN Synthetase, nitric oxide (human endothelium calcium/calmodulin-dependent reduced) (9CI) (CA INDEX NAME)
OTHER NAMES:

CN 15: PN: EP1067190 SEQID: 15 unclaimed protein
CN 15: PN: WO0103728 SEQID: 17 unclaimed protein
CN DNA (human MP-HUVEC-4 cell nitric oxide synthase cDNA plus flanks)
CN Nitric oxide synthase (human endothelium calcium/calmodulin-dependent)
CN Nitric oxide synthase (human vascular umbilical vein endothelial cell line calcium/calmodulin-dependent reduced)
SQL 1203

SEQ 1151 DQQRYHEDIF GLTLRTQEVT SRIRTQSFSL QERQLRGAVP WAFDPPGSDT
========= ===
HITS AT: 1172-1183

RELATED SEQUENCES AVAILABLE WITH SEQLINK

REFERENCE 1: 134:110462

REFERENCE 2: 134:96239

REFERENCE 3: 129:64911

REFERENCE 4: 119:242406

REFERENCE 5: 119:44105

L1 ANSWER 39 OF 41 REGISTRY COPYRIGHT 2004 ACS on STN
RN 147979-88-2 REGISTRY
CN Synthetase, nitric oxide (human endothelium reduced) (9CI) (CA INDEX NAME)
SQL 1294

SEQ 1151 DQQRYHEDIF GLTLRTQEVT SRIRTQSFSL QERQLRGAVP GVRASRLRHQ
========= ===
HITS AT: 1172-1183

REFERENCE 1: 119:3860

L1 ANSWER 40 OF 41 REGISTRY COPYRIGHT 2004 ACS on STN
RN 147883-95-2 REGISTRY
CN Synthetase, nitric oxide (cattle clone 8a4 reduced) (9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN Synthetase, nitric oxide (ox clone 8a4 reduced)
OTHER NAMES:
CN 10: PN: US6051559 SEQID: 10 unclaimed protein
CN Synthetase, nitric oxide (ox clone 8a4)
SQL 1205

SEQ 1151 LRDQQRYHED IFGLTLRTQE VTSRIRTQSF SLQERHLRGA VPWAFDPPGP
======= =====
HITS AT: 1174-1185

RELATED SEQUENCES AVAILABLE WITH SEQLINK

REFERENCE 1: 132:298871

REFERENCE 2: 123:332117

REFERENCE 3: 118:250532

L1 ANSWER 41 OF 41 REGISTRY COPYRIGHT 2004 ACS on STN
RN 147883-59-8 REGISTRY
CN Synthetase, nitric oxide (cattle clone pEC-NOS reduced) (9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:

CN Synthetase, nitric oxide (ox clone pEC-NOS reduced)
SQL 1205

SEQ 1151 LRDQQRYHED IFGLTLRTQE VTSRIRTQSF SLQERHLRGA VPWAFDPPGP
========= =====

HITS AT: 1174-1185

RELATED SEQUENCES AVAILABLE WITH SEQLINK

REFERENCE 1: 119:110246

REFERENCE 2: 119:66433

REFERENCE 3: 118:250527